8493

Diag. Cht. No. 8551-3.

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. BO-025159 *Office No.* H-8493

LOCALITY

State Alaska

General locality Prince William Sound

Locality Port Valdez

19 59

CHIEF OF PARTY

H. J. Seaborg

LIBRARY & ARCHIVES

DATE JAN 20 1960

USCOMM-DC 5087

8493

Form 537
(Ed. June 1946)

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H-8493

Field No. BO-025159

State Alaska

General locality Prince William Sound

Locality Port Valdez

Scale 1:2,500 Date of survey September 1959

Instructions dated 13 July 1959

Vessel USC&GSS BOWIE

Chief of party H. J. Seaborg

Surveyed by W. P. James

Soundings taken by fathometer, ~~xgraphic recorder~~, hand lead, ~~xxx~~

Fathograms scaled by JWB

Fathograms checked by RLB

Protracted by WPJ

Soundings penciled by WPJ

Soundings in fathoms ~~feet~~ at ~~MEAN~~ MLLW

REMARKS: This survey is considered entirely superseded by H-8899(1966). See Review-section 6-B of H-8899(1966). JWW 12-9-76

U. S. GOVERNMENT PRINTING OFFICE 16—66520-1

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SURVEY H-8493, FIELD NO. BO-025159 (Bp 58644)

Scale 1:2,500

September 1959

H. J. Seaborg — Chief of Party

A. PROJECT: INSTRUCTIONS - Special Project 12-59, Valdez Harbor, dated 13 July 1959.

B. SURVEY LIMITS AND DATES: The project is located at Valdez Harbor, Prince William Sound, Alaska. The survey is bounded on the northeast by the low water line, on the southwest by a line 0.5 mile out and parallel to shore. The northwestern boundary is 0.6 mile northwest of the Valdez dock and the southeast boundary is 0.8 mile southeast of the dock. The hydrography was completed between the dates of 4 thru 11 September 1959.

C. VESSEL AND EQUIPMENT: Coast Survey Launch 184, a 26-foot Navy motor whaleboat of plastic construction, was used in this survey. At the low speed necessary to execute this large scale survey, wind had a considerable effect on this light launch. The launch was equipped with an 808 type fathometer.

Soundings in dock areas were obtained by a tag-line survey. A 16-foot plastic skiff was used in this survey. Soundings were taken with an 11-fathom leadline. Distance was measured with a wire tag-line graduated every 15 meters. Ranges were established on the wharfs for alignment.

D. TIDES AND CURRENTS: The tide staff was located at the north side of the north wharf. Readings were taken every half hour during hydrography.

The staff value of 3.0 feet for mean lower low water was obtained by comparing the 1956 elevations of 4 bench marks which were referred to MLLW and the 1959 elevations of these marks which were referred to zero staff.

E. SMOOTH SHEET: The projection was hand ruled aboard the Ship BOWIE. There were no unusual or substandard methods employed in shoreline transfer or control plotting.

Fixes 174b and 175b for the location of a group of piling near south dock were swingers. The boatsheet positions were used.

The leadline soundings taken off pier or wharf faces were shifted slightly offshore on the smooth sheet in order to make them legible. The position dots have not been shifted.

F. CONTROL STATIONS: Third-order triangulation control for the project was established prior to hydrography by expanding a 1901 and 1941 scheme. Supplementary control was established by plane-table or sextant methods. The topographic stations were located on tin sheet BO-A-59. For additional information see "LIST OF SIGNALS" attached to this report. T-7114

G. SHORELINE: Shoreline was transferred from tin sheet BO-A-59. The shoreline and topography were located by a planetable survey, running from 1 September thru 16 September 1959. The reader is referred to "TOPOGRAPHIC REPORT" for BO-A-59 for additional information. T-7114

H. SOUNDINGS: Soundings were obtained by both an 808 fathometer and a leadline. Bar check data was used to determine the velocity and draft correction for the echo soundings. The leadline was calibrated after each day's soundings. "ABSTRACT OF BAR CHECK DATA" is attached to this report.

I. CONTROL OF HYDROGRAPHY: The launch hydrography was controlled by three-point fixes taken with the standard navy sextant. The skiff hydrography was controlled by tag-line methods.

J. ADEQUACY OF HYDROGRAPHY: The survey is complete and adequate and should supersede all previous surveys of the area.

K. CROSSLINES: Approximately 8 per cent crosslines were run. All crossings were good except for the junction of skiff and launch hydrography, 30 meters off the southwest face of the north dock. The depth was 10 fathoms on a 30 per cent sloping bottom. Lead-line soundings were about 1 fathom greater than echo soundings.

L. COMPARISON WITH PRIOR SURVEYS: Comparing this survey with the 1901 survey H-2554, shows no material change except for shoaling around latitude 61° 06' 25" longitude 146° 16' 10", mouth of a Valdez Glacier runoff stream. The zero curve has shifted about 150 meters southwestward in this area.

Comparison of this survey with the 1956 survey reveals only man-made changes in small boat basin and the addition of Union Oil Company Pier located at latitude 61° 06' 35", longitude 146° 16' 11".

M. COMPARISON WITH CHART: Comparison was made with correction to C&GS Chart 8519 (plan) dated 8 September 1956. Changes are described in paragraph 2, section L of this report.

N. DANGERS AND SHOALS: There were no dangers or shoals discovered in this area.

O. COAST PILOT INFORMATION: A copy of "COAST PILOT NOTES" by CDR H. J. Seaborg, Chief of Party, is attached to this report.

P. AIDS TO NAVIGATION: Valdez Harbor Entrance South Light, Light List No. 2693.1 is a flashing red every 4 seconds. It is located at the northwest end of a wooden breakwater at the south side of small boat basin entrance. It's position, latitude 61° 06' 48.5" and longitude 146° 16' 18.3", was located by planetable.

Q. LANDMARKS: Two landmarks were selected for charting. They are VALDEZ, TANK (Elevated), 1959 and VALDEZ, BPR Asphalt TANK FARM, STACK, 1959. See attached copy of form 567. L-134(60)

R. GEOGRAPHIC NAMES: No geographic names survey was made.

Z. TABULATION OF DATA:

1. List of Signals
2. List of Statistics
3. Abstract of Bar Check data.
4. Coast Pilot Notes
5. Form 567

Wesley P James
Wesley P. James
LTJG, C&GS

LIST OF SIGNALS

SHEET BO-025159

Triangulation

VALDEZ NORTH BASE 1901
DOCK 1959
TOWN 1959
UNION 1959
VALDEZ, BPR, Asphalt Tank Farm, STACK, 1959
VALDEZ, TANK (Elevated) 1959

Topographic Stations

CON
JEF
LIT
PEG
RED
VAL
WIT

Hydrographic Stations

Bev
Far
Nor

STATISTICS RECORD

FOR

FIELD SHEET NO. BO-025159

HYDROGRAPHIC SURVEYS

REGISTRY SHEET NO. H-8493

SURVEYED BY BOAT: Launch #184 & Skiff

LOCALITY: Port Valdez, Alaska

DATE	DAY	VOL	POSITIONS Vol.	POSITIONS Total	MILES OF SOUNDINGS Nautical Vol.	MILES OF SOUNDINGS Nautical Total	MILES OF SOUNDINGS Statute Vol.	MILES OF SOUNDINGS Statute Total	NAUT. MILES To & From	NAUT. MILES Miss Run	NO. BOTTOM SAMP.
~~xxxxx~~											
9/4/59	a	1		185	TAG-LINE						
9/8/59	b	1		178	TAG-LINE						
9/9/59	c	1	125			8.2		9.4	0.1	0.5	
	c	2	89	214	5.8	14.0	6.7	16.1	0.0	1.0	
9/10/59	d	2	224		10.2		11.7		0.0	1.0	4
	d	3	164	388	7.4	17.6	8.5	20.2	0.1	1.0	
9/11/59	e	3		28	1.1	1.1	1.3	1.3	0.1	1.0	4
				883				67.0			

ABSTRACT OF BAR CHECK DATA

308 Fathometer No. 5730

DAY	Depth in Fathoms 1	2	3	4	5	6	7	8	9	10
C	0.8	1.8	2.8	3.7	4.8	5.7	6.7	7.8	8.7	9.7
	0.9	1.8	2.8	3.9	4.9	5.8	6.8	7.8	8.7	9.7
D		1.8	2.8	3.9	4.9	5.8	6.8	7.7	8.7	9.8
	0.8	1.8	2.9	3.8	4.8	5.8	6.8	7.8	8.7	9.8
E		1.9	2.8	3.8	4.7	5.6	6.5	7.5	8.5	9.4
		1.8	2.7	3.7	4.8	5.6	6.6	7.5	8.5	9.4
MEAN	0.8	1.8	2.8	3.8	4.8	5.7	6.7	7.7	8.6	9.6
CORRECTION USED	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	+0.4	+0.4

PHASE COMPARISON

DAY	A-B
d	+0.2
ℓ	-0.2

COAST PILOT NOTES

1959 Field Season

Special Project 12-59 USC&GSS BOWIE

Chart 8519 Valdez, Alaska

U. S. Coast Pilot 9, Alaska
Cape Spencer to Arctic Ocean
Sixth (1954) Edition

PAGE 110

Line 37: Alaska Highway system. In 1959 a red and white painted metal stack of the steam plant was a prominent landmark when approaching Valdez. Also, prominent was the yellow painted wooden water tank located at the eastern edge of the city. Most commercial vessels . . . . . .

Line 42: The Valdez Dock Company operates the city wharf which has two faces, each about 300 feet long; the northwest-southeast face has depths of 20 feet alongside, and the north face has 10 feet near the inner end.

Line 45: about 200 feet long with a controlling depth of 20 feet alongside . . . . . .

Line 47: (Add) The cannery is no longer in operation.

PAGE 111

Line 4: The Federal dredging project of a small-boat and seaplane basin between the Valdez wharves has been completed. A timbered breakwater with a flashing red light at it's northwest end extends from the cannery wharf. Small boats tie up inside the breakwater alongside the moored wooden float. The controlling depth was 10 feet in September 1959.

Line 6: (Add) The Union Oil Company has built a fuel receiving station about 250 yards south of the cannery wharf. A pipeline extending from shore terminates in a pile supported wooden platform about 12 feet square. Cluster piles lie to the north and south of the platform.

APPROVAL SHEET

BO-025159

Field work on this hydrographic survey was inspected daily by the Chief of Party. This survey is considered complete and adequate and no additional work is necessary. All records are approved and will be forwarded.

H. J. Seaborg
CDR, C&GS
Commanding Ship BOWIE

Form 567
April 1945

DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED / ~~TO BE DISCONTINUED~~ } STRIKE OUT ONE

USC&GSS BOWIE, October 4, 1959

I recommend that the following objects which have ~~(recently been established)~~ been inspected from seaward to determine their value as landmarks be charted on ~~(the charts affected)~~ the charts indicated.

The positions given have been checked after listing by _____

H. J. Seaborg
Chief of Party.

STATE / CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION LATITUDE* ° ′	″ D.M. METERS	LONGITUDE* ° ′	″ D.P. METERS	DATUM	METHOD OF LOCATION AND SURVEY No.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
TANK	A wooden water tank painted yellow	TANK	61 07	13.319 412.3	146 15	06.942 103.9	1927	Tri. Inter.	Sept '59	X			8519
	(VALDEZ, TANK (Elevated) 1959												
STACK	A red and white metal stack about	STACK	61 06	49.461 1531.0	146 15	54.304 813.3	1927	Tri. Inter.	Sept '59	X			8519
	100 feet high.												
	(VALDEZ, B.P.R. Asphalt Tank Farm,												
	STACK, 1959)												
Fl. R 4^{s}	Small red house on red platform.	LIT	61 06	48.5 1502.0	146 16	18.3 274.5	1927	Plane-table	Sept '59	X			8519
	Light List No. 2693.1, VALDEZ												
	HARBOR ENTRANCE SOUTH LIGHT.												
	L-134(60)												

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by ~~charts~~. Information under each column heading should be given.

Form 567
April 1945

DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED / ~~TO BE DISCONTINUED~~ } STRIKE OUT ONE

USCAGSS BOWIE — October 4, 1959

I recommend that the following objects which have ~~(been)~~ been inspected from seaward to determine their value as landmarks be charted on ~~(discontinued)~~ the charts indicated.

The positions given have been checked after listing by _____

H. J. Seaborg
Chief of Party.

STATE / CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION LATITUDE* ° ′	LATITUDE* ″ D.N. METERS	LONGITUDE* ° ′	LONGITUDE* ″ D.P. METERS	DATUM	METHOD OF LOCATION AND SURVEY No.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
TANK	A wooden water tank painted yellow	TANK	61 07	13.319 412.3	146 15	06.942 103.9	1927	Tri. Inter.	Sept '59	X			8519
	(VALDEZ, TANK (Elevated) 1959												
STACK	A red and white metal stack about	STACK	61 06	49.461	146 15	54.304	1927	Tri. Inter.	Sept '59	X			8519
	100 feet high.			1531.0		813.3							
	(VALDEZ, B.P.R. Asphalt Tank Farm,												
	STACK, 1959)												
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	Light List No. 2693.1, VALDEZ												
	HARBOR ENTRANCE SOUTH LIGHT.												

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating*

FORM 197
(3-16-55)

GEOGRAPHIC NAMES

Survey No. H-8493

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
PRINCE WILLIAM SOUND										1
PORT VALDEZ									BGN	2
VALDEZ									BGN	3
										4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
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										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

George D. Bale
Geographic Names Section
5 Feb 1960

Form 946

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8493

Records accompanying survey: Smooth sheets 1; boat sheets 1; sounding vols. 3; wire drag vols. ; Descriptive Reports 1; graphic recorder envelopes 1; special reports, etc. .....

.....

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet		993
Number of positions checked		117
Number of positions revised		0
Number of soundings revised (refers to depth only)		20
Number of soundings erroneously spaced		0
Number of signals erroneously plotted or transferred		0
Topographic details	Time	4
Junctions	Time	0
Verification of soundings from graphic record	Time	26
Special adjustments	Time	

Verification by Geo. Frank Total time 72 Date 11-19-70

Reviewed by ..... Time ..... Date .....

US COMM C&GS DC

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H- 8493

The verifier should deal with the present hydrographic survey only, as the reviewer considers its relation to previous surveys and published charts. He should be thoroughly familiar with Chapters 3, 7 and 9 of the Hydrographic Manual.

1. The descriptive report was consulted and appropriate notes were made in soft pencil regarding action taken. ✓

2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude. ✓

3. All reference to survey sheets mentioned in the descriptive report include the registry number and year. ✓

4. Geographic names of hydrographic features if on sheet are in slanting lettering and of topographic features in vertical lettering. ✓

5. All items affecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken. ✓

6. All positions verified instrumentally were check marked in the sounding records. ✓

7. All critical soundings are clear and legible and are a little larger than the adjacent soundings. ✓

8. The metal protractor has been checked within the last three months. ✓

9. The protracting and plotting of all bad crossings were verified. ✓

10 All detached positions locating critical soundings, rocks or buoys were verified. ✓

11. The boat sheet was compared with the smooth sheet. ✓

12 The spacing of soundings as recorded in the records was closely followed.

13. The bottom characteristics were shown on outstanding shoals.

14. The reduction and plotting of doubtful soundings were checked.

15. The transfer of contemporary topographic information was carefully examined.

16. All junctions were transferred and overlapping curves made identical.

17. The notation "JOINS H- (19--)" was added in ink for all contemporary adjoining or overlapping sheets now registered. Those not verified are shown in pencil.

18. The depth curves have been inspected before inking.

19. All triangulation stations and transfer of topographic and hydrographic signals were checked.

20. Heights of rocks were checked against range of tide.

21. Rocks transferred from topographic surveys have a dotted curve where shown thereon. Rocks located accurately by hydrographer are encircled by dotted red curve.

22. Unnecessary pencil notes have been removed.

23. Objects on which signals are located and which fall outside of the low water line have been described on the sheet.

24. The low water line and delineation of shoal areas have been properly shown.

25. Degree and minutes values and symbols have been checked.

26. Questionable soundings have been checked on the fathograms.

27. Source of shoreline and signals (when not given in report).

28. All notes on sheet are in accordance with figure 171 in the Hydrographic Manual. ✓

29. All aids located, with those on contemporary topographic sheets, have been shown on survey. ✓

30. Depth curves were satisfactory except as follows:

NONE

31. Sounding line crossings were satisfactory except as follows:

NONE

32. Junctions with contemporary surveys were satisfactory except as follows:

NONE

33. Condition of sounding records was satisfactory except as follows:

NONE

34. The protracting was satisfactory except as follows:

NONE

35. The field plotting of soundings was satisfactory except as follows:

NONE

36. Notes to reviewer:

NONE

Verified by Date

RAC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. Apr. 1950

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coast and Survey~~ 25 March 1960

Division of Charts: R. H. Carstens

Plane of reference approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 8493

Locality Valdez Harbor, Alaska

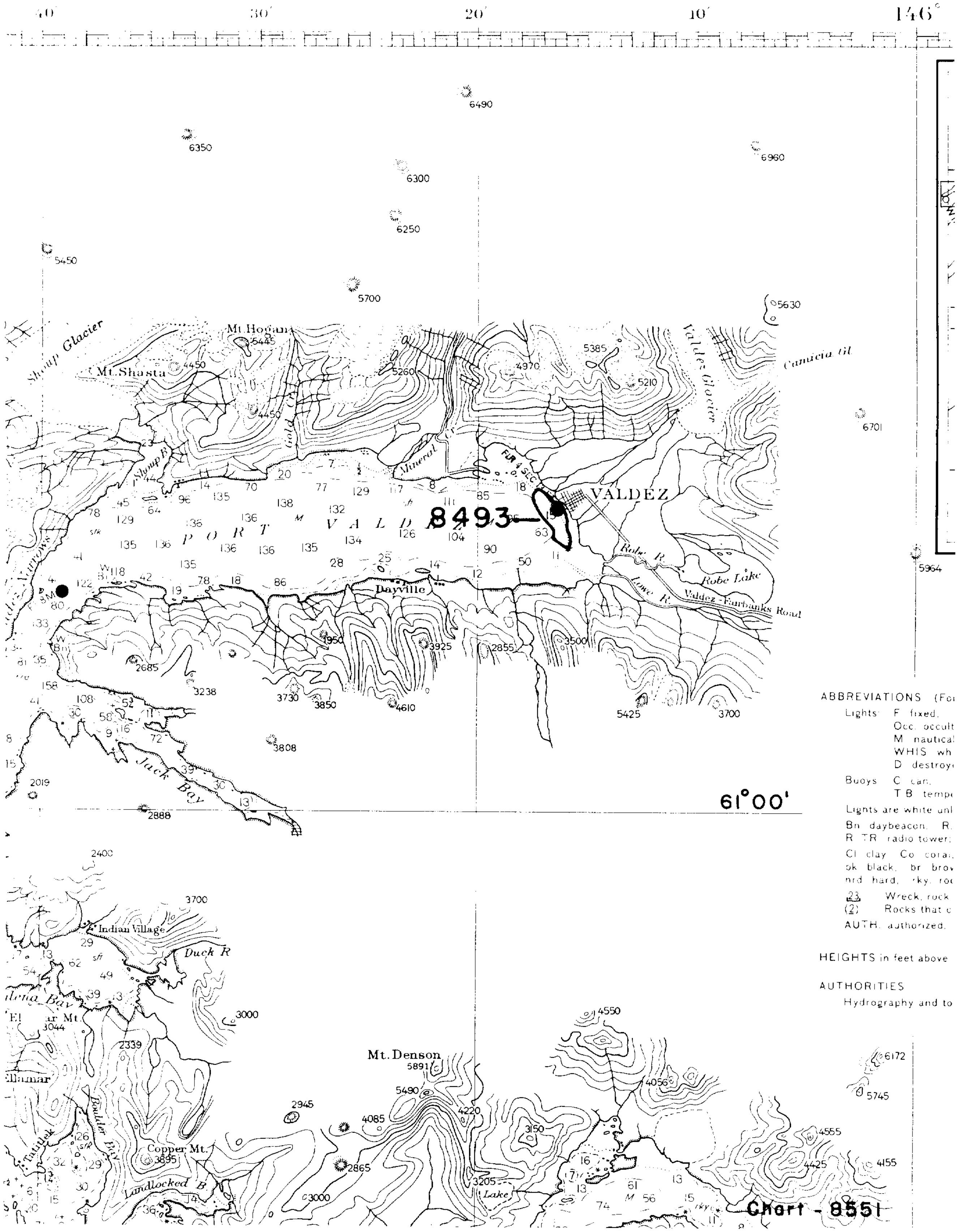
Chief of Party: H. J. Seaborg in 1959
Plane of reference is mean lower low water, reading
2.9 ft. on tide staff at Valdez
16.4 ft. below B. M. 1 (1927)

Height of mean high water above plane of reference is 10.9 ft.

Condition of records satisfactory except as noted below:

William Shoho
Chief, Tides Branch
~~Chief, Division of Tides and Currents.~~

U. S. GOVERNMENT PRINTING OFFICE 877933


40′
30′
20′
10′
146°
Mt. Hogan
Mt. Shasta
Shoup Glacier
Valdez Glacier
Camicia Gl
Mineral
VALDEZ
8493
PORT VALDEZ
Dayville
Robe R.
Robe Lake
Lowe R.
Valdez-Farbanks Road
Jack Bay
Valdez Narrows
61°00′
Indian Village
Duck R
Copper Mt.
Mt. Denson
Landlocked B
Boulder Bay
Tatitlek
Lake
Chart - 8551
ABBREVIATIONS
Lights F fixed.
Occ. occult
M nautical
WHIS wh
D destroy
Buoys C can.
T B temp
Lights are white unl
Bn daybeacon.
R TR radio tower.
Cl clay. Co coral.
bk black. br brov
hrd hard. rky roc
Wreck, rock
Rocks that c
AUTH. authorized.
HEIGHTS in feet above
AUTHORITIES
Hydrography and to

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8493

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
12/16/60	8551	Helmer	Before ~~After~~ Verification and Review Exam No correction at charted scale (1:2500 to 1:200,000)
7-25-61	8502	Earl M Gregory	Before ~~After~~ Verification and Review Exam No Corr at this scale
6-25-63	8519	D.E. Westbrook	Before ~~After~~ Verification and Review
7/28/80	16708	Nautech	Before ~~After~~ Verification and Review No corr superceded by 11-8899
8-19-91	16707	W.O. Otto	Before ~~After~~ Verification and Review
9-11-91		DC Harpine	No corr. Superceded by H-8899
8-19-91	16700	W.O. Otto	Before ~~After~~ Verification and Review No Correction
9-11-91		DC Harpine	~~Entity Applied~~ Dwg #26
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.